Mission Capabilities Framework

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A Better Framework for Transformation

A Concept for Managing the Trade Space for

Objective Force Transformation

While Linking

Requirements, Performance Specifications,

Test and Evaluation, and Training

Improving Modernization Process

- **A better way to link and align:**
  - **Requirements**
  - **Performance Specifications**
  - **T&E Issues and Criteria**
  - **Training**

- **Align while supporting the tenets of acquisition reform**
  - **Performance Specifications**
  - **Spiral Development**
  - **Technology Push**
  - **Cost as an independent variable (CAIV)**

Get the communities into a common context to facilitate collaboration
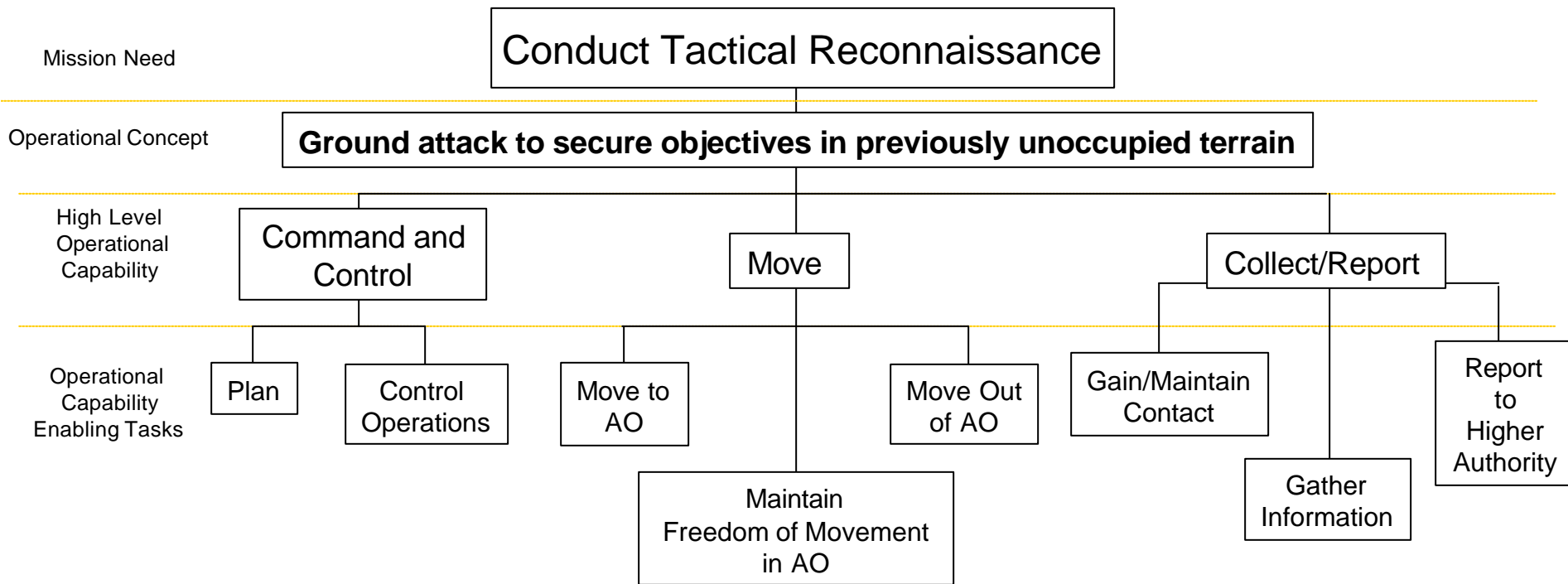
Mission Capability Concept

- **Start with the Mission Need**

  – **If there is <u>no need</u>, there is <u>no program</u>**

- **Propose an Operational Concept**

- **Build the <u>mission</u> work breakdown structure, called the Mission Capabilities Framework (MCF), which identifies:**

  – **The top level missions, with their purposes**

  – **The <u>tasks</u> that have to be done to accomplish the mission(s) under the operational concept**

  – **The applicable <u>conditions</u> for each of the top level missions**

  – **The outcomes or <u>performance</u> for each mission and task**

Capitalize on Mission Training Plan (MTP) Format

MCF Detailed Breakdown

- **<u>High level operational capabilities</u> are developed independent of forces and systems, and stated in terms of WHAT needs to be accomplished**

- **<u>Operational Capabilities Enabling Tasks</u> are developed independent of forces and systems, and further decompose WHAT has to be accomplished**

- **<u>Subordinate Enabling Tasks</u> should be developed to the point where the capability can clearly be defined as a <u>strength or weakness</u> in accomplishing the mission (bottom level)**

  - **Sets the stage for making the connection from**

    - **<u>WHAT</u> you need to do, <u>to</u>**

    - **<u>HOW</u> you will do the mission**

MCF Reconnaissance Example

Mission Need

Conduct Tactical Reconnaissance

Operational Concept

Ground attack to secure objectives in previously unoccupied terrain

High Level Operational Capability

Command and Control

Move

Collect/Report

Operational Capability Enabling Tasks

Plan

Control Operations

Move to AO

Move Out of AO

Gain/Maintain Contact

Report to Higher Authority

Maintain Freedom of Movement in AO

Gather Information

MCF Guiding Principles

- Shape the MCF by an operational concept
- Describe **WHAT** you need to do - **NOT HOW**
  - Think in broad generic terms as you develop
  - Don't think in terms of prescriptive technology solutions
  - Leave trade spaces wide open - even at concept and O&O level
- Use an MTP-like approach and use the MTP format to represent the MCF

Bottom line: Don't constrain the means by which the mission can be done

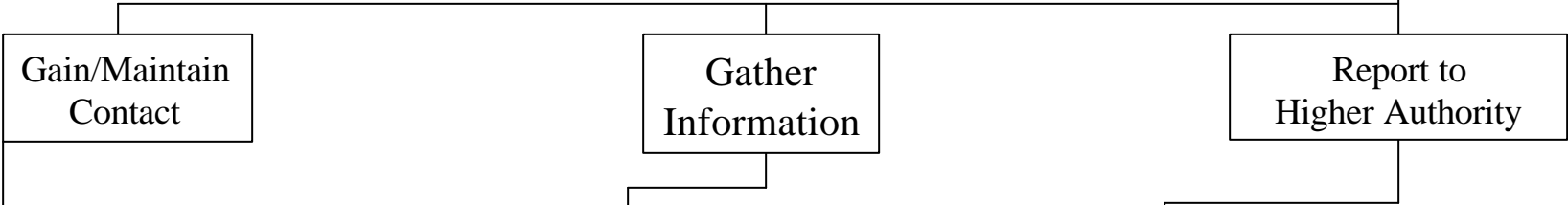Mission Need: | Conduct Tactical Reconnaissance (partial example)

Operational Concept: | **Ground attack to secure objectives in previously unoccupied terrain**

High level Operational Capability: | Collect/Report

Operational Capability Enabling Tasks:

| Gain/Maintain Contact | Gather Information | Report to Higher Authority |

Subordinate Enabling Tasks:

— Detect enemy before detected
— Execute action on contact
— Maintain contact w/elements not destroyed

— Locate/ID enemy forces, positions, obstacles
— Recon all terrain and locales
— Inspect/eval all bridges
— Locate/breach minefields
— Locate bypasses of built-up areas

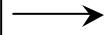—Categorize collected info
—Generate report
—Deliver report

Reconnaissance Example
11/07/2001

Collect/Report (partial example)

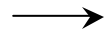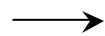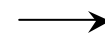| Task	Performance	Metric
Gather Information	Recon assets collect mission relevant information about AO to satisfy commander's critical information requirements	• Unit collects sufficient information to answer CCIR
• Locate/ID enemy forces, positions, obstacles	Recon assets determine specifics regarding size, activity, location, unit, time and equipment of mission-relevant enemy activity in the AO	• % enemy forces counted and specifically ID'd • % enemy positions identified and mapped (including weapons range fans) • % obstacles located and mapped
• Recon all terrain and locales	Collect critical information regarding key terrain, trafficability, fields of fire, natural obstacles and cover/concealment	• % key terrain located • % road network classified • % AO evaluated
• Inspect/eval all bridges	Validate load limitations of various routes and requirement for engineer bridging assets	• % bridges located/classified • % fords located/classified • % culverts located/classified

Reconnaissance Example

11/07/2001

Collect/Report (partial example)

Task	**Performance**	**Metric**

• Locate minefields ⟶ Identify, mark (electronically or physically) to facilitate rapid movement of main body forces
- • % minefields located
- • % minefields marked

• Locate bypasses of built-up areas ⟶ Recon assets identify and mark (electronically or physically) concealed and, if possible, covered routes around built-up areas
- • # of bypass routes found
- • quality of bypasses

Reconnaissance Example
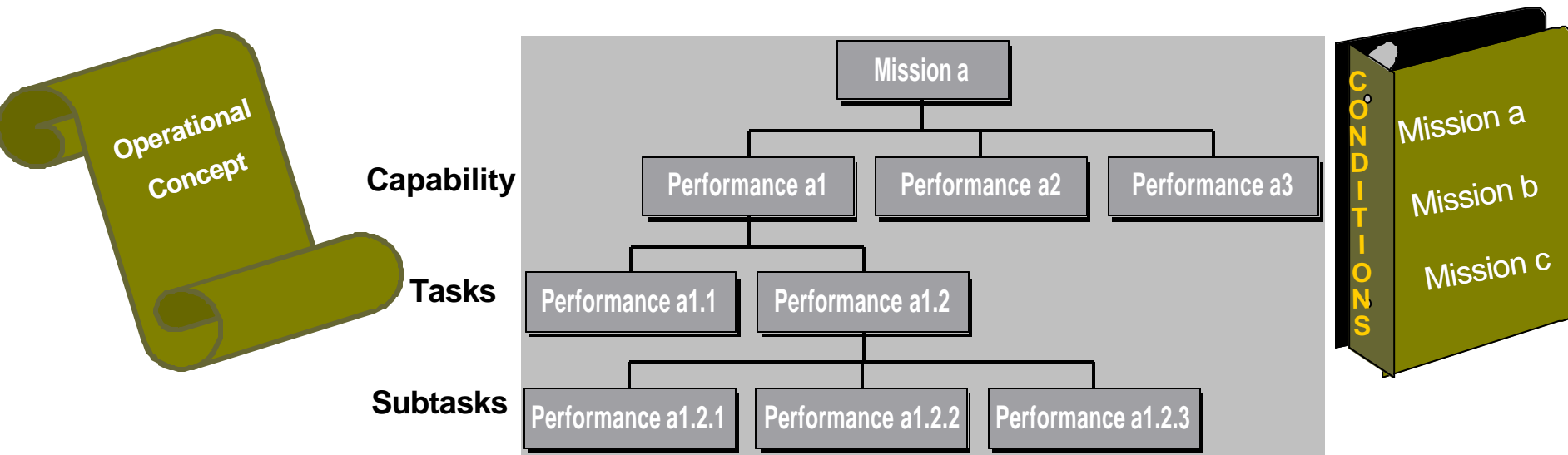
Transitioning from WHAT to HOW

Once the lowest level of description is achieved, we can examine concepts for satisfying HOW the requirements can be met

- With an operational concept in mind, develop the HOW by mapping alternative solutions into the elements of the MCF

- Analyze how well the solutions satisfy the performance considering all aspects (e.g. training organization, systems, people, etc.), the trade space

- As in the MTP, performance is defined for tasks and sub-tasks (based on conditions)

MCF Uses

- Requirements
  - **Guide the essential requirements for an ORD**
  - **Ensure mission or task standards, in terms of outcomes or meeting the commander's needs, cause(s) all the aspects to be addressed**
  - **Establish the critical operational issues and criteria (COIC) as the standards**

- Performance Specifications
  - **Make MCF package an essential part of the solicitation**
  - **Map proposal into the MCF - see how well all the system(s) attributes contribute to the mission**
  - **Responses to the solicitation will make clear which offerors really understand the problem**
  - **Ensure that contractors will build to what the user needs**

- System Evaluation Plans
  - **Testing to learn how well the user's mission need is satisfied**
  - **Evaluating to understand operational mission accomplishment**
  - **Criteria directly observable in operational training events**

- Training Plan Ready to Use

MCF Continuum

Operational Concept

	Mission a
Capability	Performance a1 · Performance a2 · Performance a3
Tasks	Performance a1.1 · Performance a1.2
Subtasks	Performance a1.2.1 · Performance a1.2.2 · Performance a1.2.3

CONDITIONS

Mission a

Mission b

Mission c

Package supports transformation from beginning to end ...

Requirements   Performance Specs   COIC   MTP

Finding the Balance

Cost - effective

Useful

Achievable
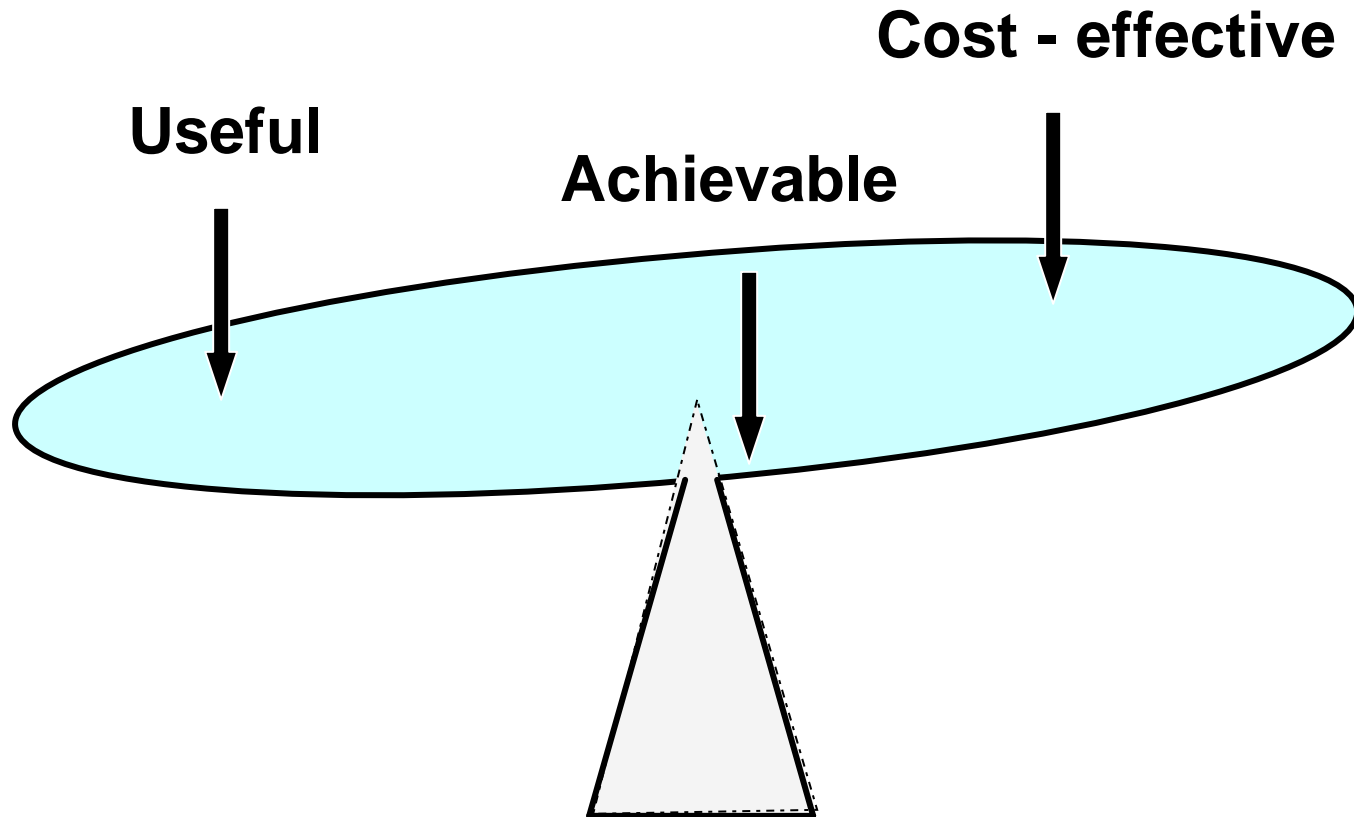
Summary

- **"Mission Capabilities" has potential to be the common framework for**
  - **User Requirements**
  - **Performance Specifications**
  - **T&E Issues and Criteria**
  - **Training**
- **MCF Benefits**
  - **Collaboration tool for all stakeholders**
  - **Avoids surprises in the acquisition process**
  - **Creates more flexibility than current requirements process**
  - **Opens the trade space**
  - **A guide for ORD development**
  - **Improves completeness of all aspects of investigation**
  - **Better ability to monitor completeness of proposals**
  - **Better linking of requirements, performance specifications, T&E and training in the environment of acquisition reform**